IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Takashi IGARASHI et al.

Application No.: 10/611,918 Examiner: H. SHAKERI

Filed: July 3, 2003 Docket No.: 108833.01

For: LENS MACHINING APPARATUS, LENS MACHINING METHOD, AND LENS MEASUREMENT METHOD

BRIEF ON APPEAL

Appeal from Group 3727

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Hoya Corporation, by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 011780, Frame 0857.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellants, Appellants' representative, or the Assignee, that may be related to, or that will directly affect or be directly affected by or have a bearing upon, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claim 5 is on appeal.

Claim 5 is pending.

No claims are allowed.

Claim 5 is rejected.

Claims 1-4 are canceled.

IV. STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed on January 11, 2010. By an Advisory Action dated January 19, 2010, it was indicated that the requested amendments were not entered.

An Amendment After Notice of Appeal Under 37 C.F.R. §41.33 was filed on March 26, 2010. By an Advisory Action dated April 8, 2010, it was indicated that the requested amendments were not entered.

Thus, the claims are as they were amended in the April 7, 2009 Amendment.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed invention relates to a lens machining method which machines the circumferential edges of lenses to facilitate fitting lenses into lens frames **{page 1, lines 9-13}**. An objective of the subject matter of the pending claim is to provide a lens machining method that can be accomplished with the operation of a single chuck and according to highly precisioned machining **{page 3, line 24 - page 4, line 4}**.

Claim 5 is directed to a lens machining method **{Fig. 23, Steps S1-S19, page 60, line 17 - page 62, line 7}** comprising:

machining a plastic lens for spectacles held at a center of the plastic lens such that a circumferential surface of the held plastic lens is edged away by a revolving machining tool for circumferential surface machining by causing the held plastic lens to revolve about the center of the plastic lens in order to edge away the circumferential surface about an entire circumference of the held plastic lens, thereby machining the held plastic lens to a prescribed circumferential edge shape **{Fig. 23, Steps S1-S19, page 60, line 17 - page 62, line 7}**, wherein

the machining includes rough machining **{Fig. 23, Step 11, page 61, lines 12-14}** and finishing machining being performed by forcibly edging the plastic lens using the same revolving machining tool **{Fig. 23, page 61, lines 15-17}**,

the forcible edging using the same revolving machining tool machines the plastic lens by reading and using a parameter of each machining condition, including a turning speed of the revolving machining tool, a turning speed of the held plastic lens and a number of revolution of the plastic lens, from a table previously prepared **{Fig. 23, Step S12, page 65, line 14 - page 67, line 5}**,

the table includes columns and rows so as to specify a corresponding parameter by designating a column and a row in accordance with the plastic lens being machined **{Fig. 24, page 67, line 5 - page 69, line 17}**,

the rows include a first division for each number of revolutions of a lens corresponding to the type of material of the plastic lens being machined, and each first division includes a further division for each edge thickness of the plastic lens being machined **{Fig. 24, page 67, line 5 - page 69, line 17}**,

the columns have a first division for each kind of a plurality of machining including a circumferential surface rough machining and a circumferential finishing machining and each first division includes a further division for the turning speed of the plastic lens and a turning speed of the revolving machining tool **{Fig. 24, page 67, line 5 - page 69, line 17}**,

a value of the corresponding parameter is provided at a location in the table where a designated column intersects with a designated row **{Fig. 24, page 67, line 5 - page 69, line 17}**, and

a number of revolutions of the plastic lens is calculated based on the type of material of the plastic lens, the edge thickness of the plastic lens being machined, the kind of machining and the turning speed of the plastic lens, and thereby the lens is machined based on the number of revolutions **{Fig. 25, page 71, lines 20-23}.**

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1) Claim 5 is rejected as indefinite under 35 U.S.C. §112, second paragraph;

2) Claim 5 is rejected as having been obvious under 35 U.S.C. §103(a) over JP-A-64-016346 to Satoru.

3) Claim 5 is rejected as having been obvious under 35 U.S.C. §103(a) over Satoru in view of U.S. Patent No. 5,053,971 to Wood.

VII. ARGUMENT

The Final Rejection rejects claim 5, the only claim pending in this application, under 35 U.S.C. §112, second paragraph as allegedly being indefinite, and under 35 U.S.C. §103(a) as allegedly having been obvious in view of one or two applied references. However, with respect to claim 5, the law relating to indefiniteness and obviousness is improperly applied. Proper application of the law, and reasonable interpretations of Appellants' disclosure, claim and the references, demonstrates that the relevant standards for indefiniteness and obviousness have not been met, and the claimed subject matter is definite and allowable over the applied references.

A. Claim 5 is Definite

Claim 5 is definite. The Final Rejection rejects claim 5 under 35 U.S.C. §112, second paragraph, for two reasons: 1) reciting "rows" instead of columns and 2) reciting "calculated" instead of "set." Appellants address these reasons in turn.

First, although the Final Rejection asserts that claim 5 is indefinite, the only justification for the indefiniteness rejection is an alleged inconsistency between the claims and the specification. In particular, the Final Rejection asserts that "[c]laim 5 as now amended recites for rows to include a first division ... whereas specification as originally filed, e.g., in paragraph [0170], describe for the column to include these data." The reason provided in the Final Rejection is not a proper basis for an indefiniteness rejection.

As stated, the Final Rejection gives no reason for regarding claim 5 as indefinite. The term "rows" is just as clear and definite as the term "columns." If, as suggested above, the Final Rejection is asserting that the application does not support the recited subject matter, Fig. 24 clearly supports the above features. To any extent that Appellants' specification mixes columns and rows, as the prosecution history appears to allege, Appellants' disclosure actually

supports either construction with the Table at Fig. 24. In other words, Fig. 24 clearly supports the recited rows.

Second, the Final Rejection asserts that "it is unclear what is being claimed by reciting the number ... is calculated." Appellants' application discloses that "y" (as the number of revolutions of a plastic lens) can be calculated. See, *e.g.*, page 69, line 8 - page 71, line 14 and Fig. 25. One of ordinary skill in the art would have understood Appellants' disclosure at least on pages 69-71 regarding the formula $y = 0.8X - 3.1 + 1$ as supporting the recited calculation in an exemplary manner.

The second paragraph of 35 U.S.C. §112 requires claims to be set out and circumscribe a particular area with a reasonable degree of precision and particularity. *In re Johnson*, 558 F.2d 1008, 1015 (CCPA 1977). The test for compliance with 35 U.S.C. §112, second paragraph, is whether one skilled in the art would understand the bounds of the claims when read in light of the specification. *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 875, (Fed. Cir. 1993), *cert. denied*, 510 U.S. 1100 (1994) (emphasis added). If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, §112 demands no more. *See, also, In re Merat*, 519 F.2d 1390, 1396 (CCPA 1975) (stating that the question under §112, second paragraph, is whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bounds of the claimed subject matter are distinct. *See, also, In re Warmerdam*, 33 F3d 1354, 1361 (Fed. Cir. 1994). These standards are met here.

The Federal Circuit has held that claims need not even "be plain on their face in order to avoid condemnation for indefiniteness; rather, what [this court has] asked is that the claims be amenable to construction, however difficult that task may be." *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001); *see also In re Marosi*, 710 F.2d

799, 803 (Fed. Cir. 1983) (finding claims not indefinite when specification provided "a general guideline and examples sufficient to enable a person of ordinary skill in the art to determine whether claim limitation is satisfied); *Xerox Corp. v. 3COM Corp.*, 458 F.3d 1310, 1323 (Fed. Cir. 2006) (holding claims not invalid for indefiniteness as "subject to construction" and not "insolubly ambiguous," citing *Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed. Cir. 2004) (holding that a claim will not be held invalid if the "meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree")). Claim 5, particularly when read in light of the specification, is amenable to construction, not insolubly ambiguous, and therefore definite according to the articulated standard.

The Final Rejection, therefore, errs where it asserts that "claim 5 has been amended to read over prior art applied, and claim recites features not clearly defined by the specification as originally field, [sic] and as was indicated in the Office Action, the deficiencies appears [sic] to be of clarity and not of enablement. Applicant's explanation of how columns and rows meet the recited features and/or how column and rows may be defined, does not overcome the deficiencies." See Final Rejection page 6, lines 11-16. One of ordinary skill in the art would understand the metes and bounds of the claimed subject matter based on Appellants' claims and the specification, as filed.

B. Claim 5 Would Not Have Been Obvious Over Satoru Alone, Or Satoru In View of Wood

Claim 5 would not have been obvious. The Final Rejection errs when it asserts "one of ordinary skill in the art would have known that desired finish and/or rough machining would directly depend on the thickness of the work, or the amount to be abraded, therefore it would have been obvious to one of ordinary skill in the art to modify the Table to further include the thickness of work in addition to the material to be cut in achieving the desired result, *e.g.*, in abrading a plastic lens commonly used." See Final Rejection, page 4, line 21 -

page 5, line 6. Further, the Final Rejection errs when it alleges "it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of JP '346 with additional variables, *e.g.*, thickness as taught by Wood to adopt the method for operations like chamfering, grooving, etc." Satoru does not support the Final Rejection's assertion that a skilled artisan would have known that the desired machining would depend on the thickness of the work. Further, Wood merely discloses "verify[ing] that there will be sufficient thickness at the peripheral edge of the cut lens to permit beveling." Thus, the Final Rejection errs in asserting that a person of ordinary skill in the art would have either (1) modified Satoru or (2) modified Satoru in view of Wood, to obtain the features recited in claim 5.

1. Satoru Would Not Have Been Modified Either Alone, Or In View Of Wood, To Render Obvious The Subject Matter Of Claim 5

Claim 5 would not have been obvious because the Final Rejection mischaracterizes or otherwise avoids the specifically-recited claim language. Claim 5 is directed to a number of revolutions of the plastic lens that is calculated based on ... the edge thickness of the plastic lens. The applied references, individually, or in combination, would not have rendered obvious the claim 5 feature mentioned above.

The Final Rejection acknowledges that Satoru does not disclose the thickness of the lens. The Final Rejection asserts that "one of ordinary skill in the art would have known that desired finish and/or rough machining would directly depend on the thickness of the work." This assertion is not supported by any evidence, and comes only from Appellants' disclosure.

Appellants' application discloses that a number of revolutions of the plastic lens is calculated based on the edge thickness. See, *e.g.*, Fig. 25. The Final Rejection's assertion that a skilled artisan would have known that desired machining would depend on the thickness of the work is not supported by any disclosure in Satoru. Further, the Final Rejection only relates "desired machining" to the edge thickness. The Final Rejection does not assert that a

number of revolutions of the plastic lens is calculated based on the edge thickness. Thus, even in view of the Final Rejection's unsupported assertion about what the skilled artisan would have known, Satoru would not have rendered obvious that a number of revolutions of the plastic lens is calculated based on the edge thickness, as recited in claim 5. Further, no evidence of record supports a conclusion that one of ordinary skill would have modified Satoru to make such a calculation.

The Final Rejection separately relies on the disclosure of Wood as allegedly supplying the missing edge thickness feature. This assertion is equally unreasonable because Wood only discloses "verify[ing] that there will be sufficient thickness at the peripheral edge of the cut lens to permit beveling." Verifying that there will be sufficient thickness does not correspond to calculating a number of revolutions of the plastic lens, as recited in claim 5. Thus, Wood does not supply the subject matter missing in Satoru.

2. The Final Rejection Fails To Make All Of The Necessary Evidentiary Showings In Its Obviousness Determination

The Final Rejection facially fails in its obviousness analysis. First, there is no assertion regarding the level of ordinary skill. Second, the Final Rejection's assertions regarding modifying Satoru are mere conclusory statements supported by no facts. For at least these reasons, the rejections necessarily fail.

First, the Final Rejection fails to indicate the level of ordinary skill. Regarding a positive assertion of the level of ordinary skill in the art, the Federal Circuit has held that "[t]he importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry." *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The Examiner must ascertain what would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor, a judge, a layman, those skilled in remote arts, or to geniuses in the art at hand. *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693 865 (Fed. Cir. 1983), *cert. denied*, 464 U.S.

1043 (1984). This standard is not met here. In rejecting Appellants' claim, the Final Rejection alleges that the features recited in claim 5 would have been obvious to one of ordinary skill in the art at the time of invention, without any factual support regarding what that level of skill may be. Thus, the rejection is improper.

Second, the mere conclusory statement regarding modification of the primary reference is unsupported by evidence of record. The Final Rejection concedes that Satoru "does not appear to disclose the thickness of the lens." The Final Rejection, however, asserts that "one of ordinary skill in the art would have known that desired finished and/or rough machining would directly depend on a thickness of the work, or the amount to be abraded, therefore it would have been obvious to one of ordinary skill in the art to modify the table [of Satoru] to further include the thickness of work." This mere conclusory statement is not enough to prove that there is some motivation in the prior art to modify the Satoru reference in the manner suggested by the Final Rejection.

The Federal Circuit has consistently reaffirmed its prior holdings, and the U.S. Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, (2007) confirmed, that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006) (quoting *In re Lee*, 277 F.3d 1338, 1343-46 (Fed. Cir. 2002), and *In re Rouffet*, 149 F.3d 1350, 1355-59 (Fed. Cir. 1998)). This standard is not met here because no articulated reasoning with any rational underpinning is provided. There is nothing, for example, in either Satoru or Wood that can be relied upon to support the conclusion that thickness of work, over or in addition to any other parameter, may have been chosen to modify the calculations of the Satoru reference, nor has some objective evidence otherwise in the prior art been shown.

The mere fact that references can be combined or modified does not render the resultant combination or modification obvious unless the prior art also suggests the desirability of the combination. Appellants respectfully submit that the rejection of claim 5 is improper in view of all of the above-articulated standards, at least because the Final Rejection lacks any required specific evidence of any motivation in the prior art for one of ordinary skill to modify the Satoru reference in the manner proposed by the Final Rejection.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claim 5 is in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejections of claim 5.

Respectfully submitted,

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APPENDIX A - CLAIMS APPENDIX

CLAIM INVOLVED IN THE APPEAL:

5. A lens machining method comprising:

machining a plastic lens for spectacles held at a center of the plastic lens such that a circumferential surface of the held plastic lens is edged away by a revolving machining tool for circumferential surface machining by causing the held plastic lens to revolve about the center of the plastic lens in order to edge away the circumferential surface about an entire circumference of the held plastic lens, thereby machining the held plastic lens to a prescribed circumferential edge shape, wherein

the machining includes rough machining and finishing machining being performed by forcibly edging the plastic lens using the same revolving machining tool,

the forcible edging using the same revolving machining tool machines the plastic lens by reading and using a parameter of each machining condition, including a turning speed of the revolving machining tool, a turning speed of the held plastic lens and a number of revolution of the plastic lens, from a table previously prepared,

the table includes columns and rows so as to specify a corresponding parameter by designating a column and a row in accordance with the plastic lens being machined,

the rows include a first division for each number of revolutions of a lens corresponding to the type of material of the plastic lens being machined, and each first division includes a further division for each edge thickness of the plastic lens being machined,

the columns have a first division for each kind of a plurality of machining including a circumferential surface rough machining and a circumferential finishing machining and each first division includes a further division for the turning speed of the plastic lens and a turning speed of the revolving machining tool,

a value of the corresponding parameter is provided at a location in the table where a designated column intersects with a designated row, and

a number of revolutions of the plastic lens is calculated based on the type of material of the plastic lens, the edge thickness of the plastic lens being machined, the kind of machining and the turning speed of the plastic lens, and thereby the lens is machined based on the number of revolutions.

APPENDIX B - EVIDENCE APPENDIX

NONE

APPENDIX C - RELATED PROCEEDINGS APPENDIX

NONE